Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

1. (Currently amended) A directed medication system to minimize the potential of an adverse drug reaction to a prescribed medical therapy based upon the identification of predefined drug metabolism risk markers, said directed medication system comprising:

a drug metabolism test component comprising a medical sample receiving apparatus having at least a first sample holding pad configured to receive a user's biological sample and preserve for later identification and testing of one or more predefined drug metabolism risk markers in said user's biological sample that predict a high probability of organ dysfunction that can cause said adverse drug reaction to said prescribed medical therapy; and

a written prescription instruction component containing a first instruction configured to direct a user to obtain said drug metabolism test component and to follow a test component instruction of said drug metabolism test component to obtain said user's biological sample and to submit said sample for testing to obtain a test result, and a second instruction configured to direct said user to obtain a prescribed medical therapy containing a prescription for a medication based on ~~a~~ said test result of said

drug metabolism test component ~~of said testing~~ wherein said medication is selected based on said test result to minimize the probability of causing said adverse drug reaction when ~~caused by said user taking~~ said medication is taken by said user.

2. (Previously presented) The system of Claim 1 wherein said one or more predefined drug metabolism risk markers is selected from the group consisting of DNA and enzymes.

3. (Original) The system of Claim 1 wherein said drug metabolism test component is a genomics-based test.

4. (Withdrawn – previously presented) The system of Claim 3 wherein said drug metabolism test component comprising:

a hinged folder containing said first sample holding pad wherein said first sample holding pad is impregnated with chemicals to lyse cell membranes and immobilize nucleic acids wherein said first sample holding pad has a pad indicia, said first sample holding pad configured for receiving a user's biological sample wherein said biological sample is a buccal cell sample; and

a buccal cell sampling swab wherein said swab has indicia linking said swab to said indicia wherein said first instruction further includes instructions

for collecting, applying and submitting said user's buccal cell sample.

5. (Currently amended) The system of Claim 1 wherein said second instruction further directs said user to present said test result ~~of said testing~~ to a healthcare provider to obtain said prescribed medical therapy containing a prescription for said medication selected based on said test result to minimize the probability of causing said adverse drug reaction when ~~caused by said user taking~~ said medication is taken by said user.

6. (Withdrawn – previously presented) The system of Claim 1 wherein said written prescription instruction component includes an instruction component and a prescription component wherein said prescription component includes at least a conditional dosage prescription for said medication selected to minimize the probability of an adverse drug reaction caused by said user taking said medication, said conditional dosage prescription being based on said result of said drug metabolism test component.

7. (Withdrawn – previously presented) The system of Claim 6 wherein said conditional dosage prescription further includes a prescription portion instructing a prescription provider to dispense said medication based on said result of said drug metabolism test component.

8. (Withdrawn – previously presented) The system of Claim 7 wherein said prescription portion includes a homozygous positive test instruction, a heterozygous mid-positive test instruction and a negative test instruction instructing said prescription provider to dispense said medication based on said result of said drug metabolism test component being a homozygous positive test, a heterozygous mid-positive test or a negative test.

9. (Withdrawn – previously presented) The system of Claim 7 wherein said conditional dosage prescription includes a plurality of separate prescriptions wherein said plurality of separate prescriptions includes a first prescription for a homozygous positive test result from said drug metabolism test component, a second prescription for a heterozygous mid-positive test result from said drug metabolism test component and a third prescription for a negative test result from said drug metabolism test component.

10. (Withdrawn) The system of Claim 6 wherein said prescription component further includes an initial dose prescription.

11. (Withdrawn – previously presented) The system of Claim 10 wherein said conditional dosage prescription includes a prescription portion instructing a prescription provider to dispense said medication of said initial dose prescription based on said result of said drug metabolism test component.

12. (Withdrawn – previously presented) The system of Claim 11 wherein said prescription portion includes a homozygous positive test instruction, a heterozygous mid-positive test instruction and a negative test instruction instructing said prescription provider to dispense said medication based on the result of said drug metabolism test component being a homozygous positive test, a heterozygous mid-positive test or a negative test.

13. (Withdrawn – previously presented) The system of Claim 11 wherein said conditional dosage prescription includes a plurality of separate prescriptions wherein said plurality of separate prescriptions includes a first prescription for a homozygous positive test result from said drug metabolism test component, a second prescription for a heterozygous mid-positive test result from said drug metabolism test component and a third prescription for a negative test result from said drug metabolism test component.

14. (Withdrawn – previously presented) The system of Claim 10 wherein said initial dose prescription for an initial dose of said medication is selected from the group consisting of mercaptopurine, flourouracil, or azathioprene.

15. (Withdrawn – previously presented) The system of Claim 6 wherein said conditional dosage prescription is an initial dosage of said medication.

16. (Withdrawn – currently amended) The system of Claim 15 wherein said conditional dosage prescription includes a prescription portion instructing a prescription provider to dispense said medication based on said ~~the~~ result of said drug metabolism test component.

17. (Withdrawn – previously presented) The system of Claim 16 wherein said prescription portion includes a homozygous positive test instruction, a heterozygous mid-positive test instruction and a negative test instruction instructing said prescription provider to dispense said medication based on the result of said drug metabolism test component being a homozygous positive test, a heterozygous mid-positive test or a negative test.

18. (Withdrawn – previously presented) The system of Claim 16 wherein said conditional dosage prescription includes a plurality of separate prescriptions wherein said plurality of separate prescriptions includes a first prescription for a homozygous positive test result from said drug metabolism test component, a second prescription for a heterozygous mid-positive test result from said drug metabolism test component and a third prescription for a negative test result from said drug metabolism test component.

19. (Withdrawn – previously presented) The system of Claim 15 wherein said initial

dosage of said medication is a dose of mercaptopurine, flourouracil, or azathioprene.

Claims 20-53 (Canceled)